

Amendments to the Specification:

Please replace paragraph [0002] with the following amended paragraph:

[0002] In a semiconductor manufacturing application and so on, as shown, in-for example, in Fig. 6, it is necessary to attach a ceramic susceptor 2 to an inner wall surface of a chamber 10. In order to achieve such an attachment, one end 21a of a tubular supporting member 21 made of ceramics is attached to a contacting surface (rear surface) 2b of the ceramic susceptor 2, and the other end 21c of the supporting member 21 is attached to an inner wall surface 10d of the chamber 10. The supporting member is formed by heat resistive ceramics such as alumina, aluminum nitride and so on. An inner space 6 of the supporting member 21 is communicated with an opening 10a of the chamber 10. A portion between the supporting member 21 and the chamber 10 is sealed in an airtight manner by using an O-ring 20. In this manner, a portion between the inner space 6 of the supporting member 21 and an inner space 5 of the chamber 10 can be sealed in an airtight manner, so that a gas in the inner space 5 of the chamber 10 is not leaked outside of the chamber 10. In the ceramic susceptor 2, for example, a resistant heating member 4 is embedded.

Please replace paragraph [0003] with the following amended paragraph:

[0003] A temperature of a mount surface (heating surface) 2a of the ceramic susceptor 2 for mounting a semiconductor wafer 1 reaches to a temperature, for example, not less than 400 °C and sometimes not less than 600°C. On the other hand, a sealing member made of rubber such as the O-ring 20 and so on is unendurable for high temperatures, and a heat-resistant temperature of the sealing member is normally about 200°C. Therefore, it is preferred to control a temperature near the O-ring 20 to be not more than 200°C by cooling a portion near the O-ring 20 by means of a cooling flange 8 arranged in the chamber 10.

Please replace paragraph [0006] with the following amended paragraph:

[0006] However, if such a thick flange portion is arranged to an end portion of the supporting member, in the case that the susceptor is heated to high temperatures, there is a tendency such that an inner stress concentrated at near the boundary between the main portion and the flange portion becomes excessive. Therefore, in order to prevent a failure of the supporting member, it is

necessary to set an upper limit temperature of the susceptor.

Please replace paragraph [0007] with the following amended paragraph:

[0007] An object of the present invention is to provide a susceptor supporting construction having a susceptor for heating a member to be processed and a supporting member, in which an inner space is arranged, connected to the susceptor, wherein, a A chamber having an opening is connected to the supporting member, and the opening of the chamber is in communication ~~communicated with the inner space of the supporting member.~~ In this manner, and the inner space of the supporting member is sealed in an airtight manner with respect to an the inner space of the chamber, which can suppress a heat conducted from the susceptor to the support member and can reduce a stress concentrated to the susceptor when the susceptor becomes heated to a high temperature.

Please replace paragraph [0008] with the following amended paragraph:

[0008] According to the invention, a susceptor supporting construction having a susceptor for heating a member to be processed and a supporting member, in which an inner space is arranged, ~~are connected to one another, the susceptor, wherein, a~~ A chamber having an opening is connected to the supporting member, and the opening of the chamber is in communication ~~communicated~~ with the inner space of the supporting member, and the inner space of the supporting member is sealed in an airtight manner with respect to an inner space of the chamber, ~~comprises the~~ The supporting member further ~~having~~ includes a tubular main portion, a diameter extending portion arranged at an end portion thereof to which the susceptor is faced, and one or more continuous round portions arranged between the main portion and the diameter extending portion, when viewed by an outer profile of a longitudinal section of the supporting member.

Please replace paragraph [0010] with the following amended paragraph:

[0010] A phrase "one or more continuous round portion ~~portions is arranged between the main portion and the diameter extending portion~~" means ~~that a case such that at least one two or more round portions are~~ portion is arranged between the main portion and the diameter extending portion is excluded. The number of the round portions is defined by the number of centers of curvature. If the center of curvature is one, the round portion corresponding to the center of

curvature is also one. If the round portions are two, there are centers of curvature corresponding to respective round portions.

Please replace the heading before paragraph [0014] with the following amended heading:

Detailed Description of the Preferred Embodiments Invention

Please replace paragraph [0014] with the following amended paragraph:

[0014] The present invention will be explained with reference to embodiments shown in Figs. 1 – 3. A diameter extending portion 7a is arranged to ~~at~~ one end of a tubular supporting member 7, and a diameter extending portion 7c is arranged to ~~at~~ the other end thereof. A connecting surface (end surface) 7e of the diameter extending portion 7a is connected to a connecting surface (rear surface) 2a-2b of a susceptor 2. An end surface 7g of the diameter extending portion 7c is connected to an inner wall surface 10d of a chamber 10. An inner space 6 of the supporting member 7 is communicated with an opening 10a of the chamber 10. A portion between the supporting member 7 and the chamber 10 is sealed in an airtight manner by means of an O-ring (sealing member) 20. A numeral 7d is an inner profile of a longitudinal section of the supporting member 7, and a numeral 7f is an outer profile thereof.

Please replace paragraph [0015] with the following amended paragraph:

[0015] A connecting method between the supporting member and the susceptor is not particularly limited. For example, it is possible to connect them by means of a brazing material or to connect them in a solid phase or a solid-liquid phase as shown in JP-A-8-73280. An uppermost temperature of a heating surface 2a of the susceptor 2 reaches to, for example, not less than 400°C sometimes not less than 600°C and not more than 1200°C.

Please replace paragraph [0019] with the following amended paragraph:

[0019] During investigations of a construction for reducing a stress concentration near the diameter extending portion, the present inventors found that specific shapes shown in, for example, Figs. 1 – 3 are particularly effective for this purpose. That is, in the case that one round portion 13 (13A and 13B) is arranged between the main portion 7b and the diameter extending portion 7a, it was found that a stress concentration of the supporting member could be effectively

reduced and a temperature of the diameter extending portion 7c of the chamber 10 side can be suppressed most effectively.

Please replace paragraph [0020] with the following amended paragraph:

[0020] The present inventors performed various ~~detail~~detailed investigations for the other plural shapes by means of a simulation of inner stress of the supporting member. For example, a supporting member 7A having a shape shown in Fig. 5 was investigated. In this example, a first round portion 21, a straight portion 22, an angle portion 23, a straight portion 24, a second round portion 25, a straight portion 26 and the angle portion 15 are arranged from the main portion 7f and the outer side surface 16 of the diameter extending portion 7a. Symbols R1 and R2 show respective curvature radii of the first round portion 21 and the second round portion 25. The present inventors tried to reduce an inner stress of the supporting member by arranging a plurality of round portions between the main portion 7f and the diameter extending portion 7a as mentioned above and by varying a curvature radius of respective round portions variously. However, from a result of actual simulation, it was found that an inner stress maximum value of the supporting member was extraordinarily decreased by arranging a single round portion between the main portion 7f and the diameter extending portion 7a as compared with the case such that a number of the round portions were arranged so as to disperse a stress. In this manner, the present invention has been achieved.

Please replace paragraph [0023] with the following amended paragraph:

[0023] In the preferred embodiment of the present invention, as shown in, for example, Fig. 3, a straight portion 14 extending in a direction crossing to the center axis A of the supporting member 7 is arranged between the diameter extending portion 7a and the round portion 13A (13B) when viewing the outer profile 7f of a longitudinal section of the supporting member 7. By arranging the straight portion 14, it is possible to make a thickness of the diameter extending portion 7a sufficiently larger or to make a thickness of the main portion 7b sufficiently smaller. For example, if the straight portion is not arranged in the embodiment shown in Fig. 3, a thickness of the diameter extending portion 7a becomes extraordinarily small.

Please replace paragraph [0030] with the following amended paragraph:

[0030] In the preferred embodiment, the outer profile 16 of the diameter extending portion 7a is extended in a direction substantially parallel to the center axis A of the supporting member 7. ~~An increasing~~Increasing a length (b) of the outer profile or outer surface 16 means ~~an increasing~~ a thickness of the diameter extending portion 7a. In this case, it was found that a stress near the diameter extending portion could be further reduced by increasing the length (b). From this point of view, it is preferred to set the length (b) to not less than 2 mm, more preferably not less than 5 mm.